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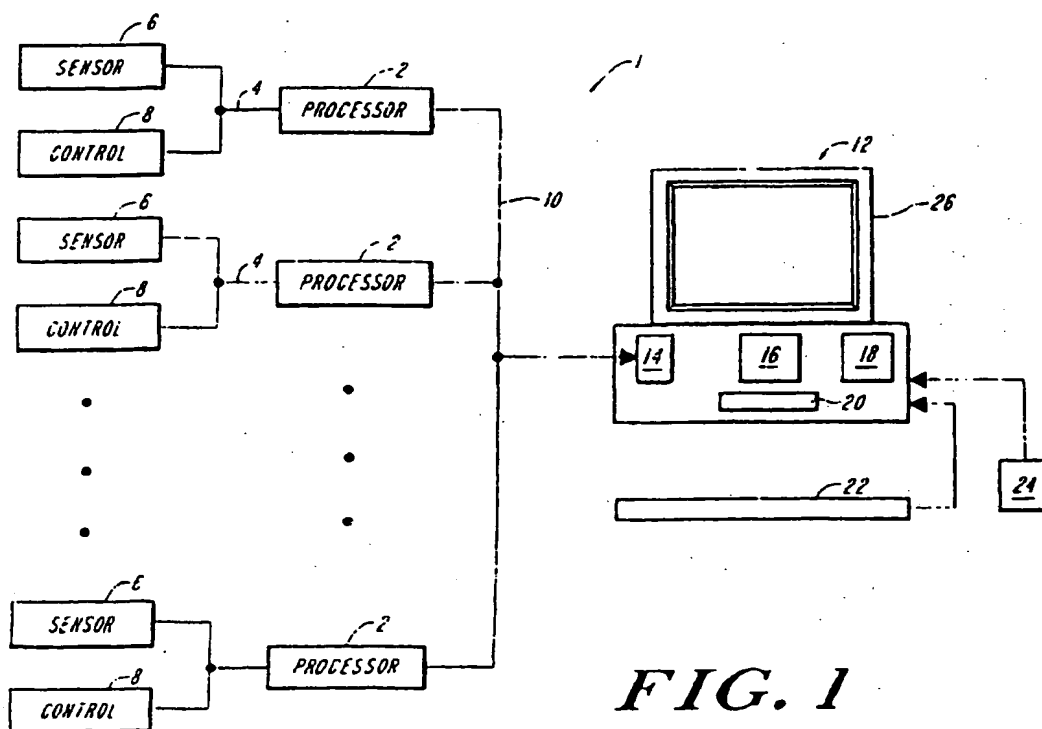
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### (54) Keypad annunciator graphical user interface

(57) A Keypad Annunciator Graphical User Interface, (KAGUI), for use by an operator of a process control system for presenting and responding to alarm state data generated by the process control system, is disclosed. The KAGUI provides an interactive display of a keypad annunciator on a monitor display screen. A pan-

el manager display and a dynamic icon enhance operator awareness, in a multi-window display environment, of alarms. The KAGUI synchronizes alarm data presented by the KAGUI with process control system alarm data and informs the operator of the status of interprocess communication.



**FIG. 1**

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## EUROPEAN SEARCH REPORT

Application Number  
EP 97 30 4138

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	EP 0 528 396 A (IBM) 24 February 1993 * the whole document *	1-14	G05B19/042 G05B19/418
X	WO 96 07958 A (WESTINGHOUSE ELECTRIC CORP) 14 March 1996 * the whole document *	1-10	
A	EP 0 310 233 A (BABCOCK & WILCOX CO) 5 April 1989 * the whole document *	1-14	
A	EP 0 389 132 A (HITACHI LTD) 26 September 1990 * the whole document *	1-14	
A	PATENT ABSTRACTS OF JAPAN vol. 011, no. 194 (P-588), 23 June 1987 & JP 62 017805 A (AMADA METRECS CO LTD), 26 January 1987, * abstract *	1	
A	US 5 353 238 A (NEEF PAUL R ET AL) 4 October 1994 * the whole document *	11-14	TECHNICAL FIELDS SEARCHED (Int.Cl.6) G05B
A	DE 39 30 581 A (ASEA BROWN BOVERI) 21 March 1991 * the whole document *	1-14	
A	WO 93 24870 A (DUCOST ENG LTD ; CALOTYCHOS JEAN ANDRE (GB); MILES MARK (GB); KINGD) 9 December 1993 * the whole document *	1-14	
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 3 June 1998	Examiner Hauser, L
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet 8

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



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LACK OF UNITY OF INVENTION  
SHEET B

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1-10

a process control system, including at least one sensor for determining the state of at least one process variable, a processor means for generating alarm state data when the variable is in a predetermined state, and a display monitor, and a method of reporting the occurrence of an alarm state within a process control system.

2. Claims: 11-14

Apparatus and method for maintaining synchronization between first data representative of a process control system and second presentation data responsive to the first data.